



Response under 37 C.F.R. 1.116  
- Expedited Examining Procedure -  
Examining Group 1774

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Paul B. Merkel, et al

IMAGE-RECORDING ELEMENT  
WITH FLUOROSURFACTANT AND  
COLLOIDAL PARTICLES

Serial No. 10/622,421

Filed 18 July 2003

Group Art Unit: 1774

Examiner: Pamela R. Schwartz

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Alexandria, VA 22313-1450.

*Valerie J. Richardson*  
Valerie J. Richardson  
*January 24, 2007*  
Date

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA. 22313-1450

Sir:

**Pre-Appeal Brief Request for Review**

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request (note: an amendment after final canceling a rejected claim has been previously submitted). This request is being filed with a Notice of Appeal. The review is requested based on the following Arguments.

**Arguments**

In paragraph 3 of the Final Rejection mailed September 26, 2006, claims 1, 2, 4, 6-8, 11, 12, 22-29 and 34 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nakano et al. (6,919,109) taken alone for reasons of record or further in view of Tsuchiya et al (6,495,242). In paragraph 4 of the Final Rejection, claims 1-8, 11, 12, and 22-34 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nakano et al. (6,919,109) in view of Tsuchiya et al (6,495,242) and further in view of Niu et al. (6,689,4330). In paragraph 5 of the Final Rejection, claims 1, 2, 4, 6-8, 11, 12, and 22-34 are rejected under 35 U.S.C.

103 (a) as being unpatentable over Tsuchiya et al (6,495,242). In paragraph 6 of the Final Rejection, claims 1 and 33 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tsuchiya et al (6,495,242) in view of Nakano et al. (6,919,109).

With respect to the rejections based on Nakano et al as the primary reference, the Examiner notes in the final rejection that Nakano et al. disclose preferred colloidal silica particles with a diameter of 50 nm or less as preferable particles to achieve the goals of the reference (i.e. rapid drying and gloss). The Examiner then alleges that this disclosure would suggest particles of a broader range to one of ordinary skill in the art, and that it would have been obvious to one of ordinary skill in the art to optimize the desired properties taught by the prior art, i.e. drying time and gloss, through determination of a commercially available colloidal silica. This rejection represents clear error for several reasons.

First, independent claim 1 of the present claimed invention is directed towards an image recording element including an image receiving layer which comprises anionic colloidal silica particles. There is no such teaching or suggestion of use of anionic colloidal silica particles in the accepting layer taught by Nakano et al. To the contrary, Nakano et al teach the use of a fine silica particles treated with a cationic polymer surface-modifier (dispersing agent, col. 8, lines 9-12, and all examples). As described in the paragraph bridging pages 15-16 of the specification, dispersions of anionic colloidal silica as employed in the present invention typically have a pH between 8-10 in order to maintain colloidal stability, and that such anionic particles would excessively agglomerate under acidic conditions. Quite to the contrary, the coating solutions containing the cationic surface-modified particles of Nakano et al are expressly taught as being acidic solutions (e.g., col. 27, lines 47-49). While Nakano et al. does teach the use of a separate basic solution “B” which may be applied to the acidic accepting layer coating solution “A” to facilitate cross-linking of the binder polymer of the accepting layer (col. 22, line 35 to col. 24, line 60), the silica particles of Nakano et al are not contained in such separate basic coating solution “B”. Nakano et al rather specifically teaches that mixing of such acidic accepting layer coating solution A and basic cross-linking solution B is to be avoided (col. 24, lines 42-51). It is thus clear that Nakano et al clearly fails to teach the use of an image receiving or accepting layer comprising anionic colloidal silica particles, and the

rejection of the present claimed invention based on the teachings of Nakano et al is accordingly in clear error on this point alone.

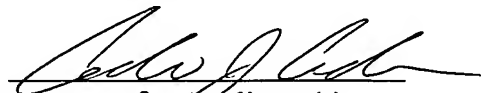
Further, as previously explained, the present claimed invention is limited to anionic colloidal silica particles with a median diameter of between 80 and 200 nm and a narrow size distribution such that at least 80% of said anionic colloidal silica particles have a diameter of within 35% smaller or larger than the median diameter of said anionic colloidal silica particles. Table VII on page 30 in the specification of the present application demonstrates that the use of anionic colloidal particles having the claimed particle size and narrow size distribution provide the advantages of higher gloss, faster dry time, good image quality, and improved coating quality. The Examiner contention that selection of such parameters would have been obvious to one of ordinary skill in the art based on the teaching of Nakano et al is entirely unsupported, as Nakano et al itself teaches a preference for smaller particles (i.e., less than 50 nm) in the cationic polymer based dispersion systems thereof. Further, the Comparative examples provided in the present specification clearly do demonstrate the advantage of the claimed invention relative to the use of smaller particles when employing anionic colloidal particle dispersions, even with relatively narrow size distributions (Comparative Elements 11 and 12), so the Examiner's comments that the criticality of the claimed parameters in the present claimed invention relative to the teachings of Nakano et al cannot be evaluated is without merit.

With respect to the Examiner's rejections of the claimed invention based on further reliance upon Tsuchiya et al as a secondary or primary reference, such rejections also represent clear error, as Tsuchiya et al fails to overcome the deficiencies of the Nakano et al reference as well as to itself establish a prima facie case of obviousness, as it also does not teach or suggest use of anionic colloidal silica particles. Rather, similar to Nakano et al., Tsuchiya et al teaches use of silica particles dispersed with a cationic polymer P-1 (col. 11, lines 10-12) in an acidic solution (col. 11, line 3). As explained above with respect to Nakano et al. such acidic solutions are not compatible with the use of anionic colloidal silica particle dispersions, and it is accordingly clear that the Tsuchiya et al. is directed towards a different system employing different type of silica particles. Accordingly, a prima facie case of obviousness has clearly not been established.

With respect to the Examiner's rejections of the claimed invention based on Nakano et al and Tsuchiya et al and further in view of Niu et al., such rejection represent further clear error as Niu et al fails to overcome the deficiencies of the primary references relative to the present claimed invention, and as the Examiner has not in any event established a prima facie case of obviousness as to how Niu et al would be combined with the primary references by one skilled in the art. Specifically, Niu et al does not teach a porous layer having a short dry time of less than 1 minute, but rather employs a relatively high level of binder (55-100% by weight at column 20, lines 23-29) which results in longer dry times. Niu (col. 21, lines 36-65) further discloses a preferred silica particle size of 300 to 400 nm, distinct from the teachings of either of Nakato et al and Tsuchiya et al., as well as from the present claimed invention. There is no disclosure or suggestion in any combination of Niu et al. and Nakano and/or Tsuchiya et al that would lead one to the instantly claimed invention. There is no teaching in Niu et al. that would lead one to modify Nakano et al. and/or Tsuchiya et al to reach the invention. Therefore, the proposed rejection represents further clear error.

The final rejection thus clearly is in error for at least the reasons asserted above, and a prompt and favorable action in response to this request is earnestly solicited.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.